

COOLANT COOLED RF BODY COIL

Abstract

A thermal barrier is introduced to a magnetic resonance imaging system between the patient bore and each of the gradient coil assembly and RF body coil assembly to maintain the temperature within the patient bore below a maximum operating temperature. This allows the RF body coils to run cooler and also provides a thermal barrier between the gradient coils and the patient bore. In one preferred embodiment, a hollow conductor structure is introduced to the RF body coils at a position between the gradient coils and the patient bore tube. In another embodiment, the hollow conductor structure replaces the flat copper strip of the prior art and itself functions as the RF body coils.